

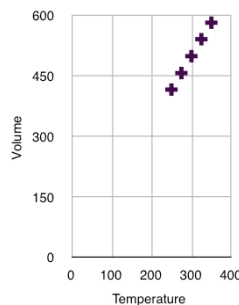
Homework Answers:

p. 113

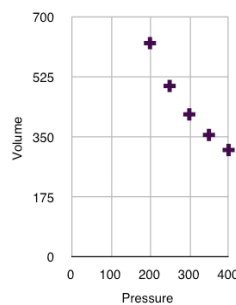
1. The pressure varies directly as the depth
2. 55.9 psi
3. ≈ 151 ft
4. A mathematical representation of a real-world situation
5. False
6. The equation $V = \frac{k}{P^2}$ gave values of V that did not agree with the data
7. ≈ 92.2 ft³
8. $p = kd$ describes a line with a constant of variation k which is the slope. Kwame used two points on the line to determine the slope of the line. Thus, Kwame's method of computing the constant of variation is valid.
10. a. IV; b. When $h = 1$, $P = 160$. When h doubles to 2, P is divided by $2^2 = 4$. Therefore, P varies inversely as the square of h .

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1. Investigate separately the relationship between the dependent variable and each independent variable by holding all but one independent variable constant.
2. 53 lb
3. 500 lb
4. Hyperbola
5. Sample: $M = 20t^2$
6. When $d = 2$, $M = 400$. Multiplying d by 2^1 results in dividing M by 2^1 ($M = 200$). By the Converse of the Fundamental Theorem of Variation, this means M varies inversely as d , or $M = \frac{k}{d}$.
7. By the Fundamental Theorem of Variation, M is multiplied by 2^2 or 4.
8. Numerator
10. a.



c.



b. Directly

d. Inversely

e. $V = \frac{kT}{P}$